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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

02/04/2010

Susan M. Donahue
Rockwell Automation, 704-P, IP Department
1201 South 2nd Street
Milwaukee, WI 53204

EXAMINER

TRUONG, LAN DAI T

ART UNIT

PAPER NUMBER

2452

DATE MAILED: 02/04/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,323	03/06/2002	Steven M. Zink	02SW049	9035

TITLE OF INVENTION: SYSTEM AND METHODOLOGY PROVIDING OPTIMIZED DATA EXCHANGE WITH INDUSTRIAL CONTROLLER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	05/04/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

7590 02/04/2010

Susan M. Donahue
 Rockwell Automation, 704-P,IP Department
 1201 South 2nd Street
 Milwaukee, WI 53204

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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nonprovisional	NO	\$1510	\$0	\$0	\$1510	05/04/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRUONG, LAN DAI T	2452	709-203000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 622 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 622 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/092,323

Examiner

LAN-DAI Thi TRUONG

Applicant(s)

ZINK ET AL.

Art Unit

2452

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 11/06/2009.
2. ☒ The allowed claim(s) is/are 1-7, 10-19, 21, 24-28, 31, 33-39.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Ldt/
Patent Examiner, Art Unit 2452

/THU NGUYEN/
Supervisory Patent Examiner, Art Unit 2452

DETAILED ACTION

1. This action is response to communications: application, filed on 03/06/2002; Amendments filed on 11/06/2009; claims 1-7, 10-19, 21, 24-28, 31 and 33-39 are pending; claims 8-9, 20, 22-23, 29-30 and 32 are canceled; claims 1, 5-6, 13-17, 21, 31, 33 and 36 are amended.

EXAMINER'S AMENDMENT

2. Examiner's amendments to the records appear below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendments was given in a telephone interview with Attorney Nilesh S. Amin Reg. No. 58,407 on January 21, 2010.

4. The claims have been amended as follows:

Claim 1 (Currently Amended) An industrial control system, comprising:

a processor;

a computer readable storage medium operationally coupled to the processor and storing computer executable instructions, the computer executable instructions, when executed by the processor, implement components comprising:

a primary aggregation component associated with an industrial controller, the primary aggregation component is created, via the processor, and defined in response to a query received from an entity remote to the industrial controller and is installed on the industrial controller, the primary aggregation component aggregates a plurality of selected data items stored in the industrial controller into an aggregated subset of data items;

a communications component associated with the remote entity, the communications component reads the aggregated subset of data items via a singular communications packet across a network, the communications component causes addition of at least one secondary aggregation component at the industrial controller in response to increased data demands, wherein the communication component causes removal of the at least one secondary aggregation components in response to decreased data demands; and

an update component associated with the remote entity, the update component receives handle information from the industrial controller across the network relating to the plurality of selected data items, the update component employs the handle information to generate an update data packet request that is transmitted across the network to the industrial controller to update one or more data items of the aggregated subset of data items in the industrial controller, wherein the handle information provides a fixed length reference pointer to a memory address in the industrial controller for each of the variable length tag references of the plurality of selected data items, wherein the update data packet request employs the fixed length reference pointer in place of a variable length tag reference for each of the one or more data items of the aggregated subset of data items that are to be updated.

Claim 21 (Currently Amended):

A method to facilitate data communications with an industrial controller, comprising:
employing a processor executing computer executable instructions stored on a computer readable storage medium to implement the following acts:

requesting tag information from an industrial controller across an industrial control network for a plurality of selected data items in the controller;

building an aggregation object from the tag information provided by the industrial controller;

installing the aggregation object on the industrial controller;

installing at least one secondary aggregation component on the industrial controller upon increased data demands; wherein the installing caused by a communication component associated with a remote entity;

removing the at least one secondary aggregation components upon decreased data demands; wherein the removing caused by the communication component associated with the remote entity;

updating the aggregation object data on the industrial controller;

receiving by the communication component associated with the remote entity data from the aggregation object that has been updated by the industrial controller via a singular communication packet;

receiving by an update component associated with the remote entity handle information from the industrial controller relating to the plurality of selected data items, wherein the handle

information provides a fixed length reference pointer to a memory address in the industrial controller for each of variable length tag references of the plurality of selected data items; and employing by the update component associate with the remote entity only the handle information to generate an update data packet that is transmitted across the network to the industrial controller to update the plurality of selected data items in the industrial controller, wherein the update data packet employs the fixed length pointer in place of a variable length tag reference for each of the plurality of selected data items that are to be updated.

31. (Currently Amended) A system to facilitate data communications with an industrial controller, comprising:

a processor;

a computer readable storage medium storing computer executable instructions, the computer executable instructions, when executed by the processor, implement components comprising:

means for requesting, by the processor, tag identifiers from a industrial controller across a communications network, wherein the tag identifiers are associated with a plurality of selected data items in the industrial controller;

means for constructing an aggregation object from the tag identifiers requested from the industrial controller;

means for installing the aggregation object on the industrial controller, wherein the means for installing installs at least one secondary aggregation component on the controller upon increased data demands and removes the at least one secondary aggregation components upon

decreased data demands, wherein the installing and removing are caused by a communication component associated with a remote entity;

means for refreshing by the industrial controller the aggregation object on the industrial controller;

means for transmitting by the industrial controller by data across the communications network from the optimized data packet that has been refreshed by the industrial controller; and

means for updating the industrial controller via employment of handle information by an update component associated with a remote entity to generate an update data packet that is transmitted across the network to the industrial controller to update the plurality of selected data items in the industrial controller, wherein the handle information provides a fixed length reference pointer to a memory address in the industrial controller for each of variable length tag references for each of the plurality of selected data items that are to be updated, wherein the update data packet employs the fixed length reference pointer in place of the tag identifier as variable length tag reference for each of the plurality of selected data items that are to be updated.

33. (Currently Amended) An industrial controller, comprising:

a processor;

a computer readable storage medium storing computer executable instructions, the computer executable instructions, when executed by the processor, implement components comprising:

a first component that processes information received from a remote entity across a network;

a primary aggregation component that aggregates a plurality of selected data items into an aggregated subset of data items, the primary aggregation component defined and installed at the industrial controller by an entity remote from the industrial controller;

a communications component associated with the entity remote from the controller, the communications component reads the subset of data items via a singular communications packet across the network, the communications component causes addition of at least one secondary aggregation component at the industrial controller upon increased data demands, wherein the communication component causes removal of the at least one secondary aggregation components upon decreased data demands; and

a update component associated with the entity remote from the industrial controller, the update component receives handle information from the industrial controller relating to the selected data items and employs the handle information to generate an update data packet request that is transmitted across the network to the industrial controller to update the plurality of data items of the aggregated subset of data items in the industrial controller, wherein the handle information provides a fixed length reference pointer to a memory address in the controller in place of a variable length tag reference for each of the plurality of selected data items that are to be updated, wherein the update data packet employs the fixed length reference pointer in place of a variable length tag reference for the plurality of selected data items of the aggregated subset of data items that are to be updated.

Reasons for allowance

5. With respect to claims 1, 21, 31 and 33, the prior arts of record, singly or in combination fails to teach the features of claim(s) limitations thereof. Specially, inter alia, it fails to teach an industrial control system, comprising: a primary aggregation component associated with an industrial controller, the primary aggregation component is created, via the processor, and defined in response to a query received from an entity remote to the industrial controller and is installed on the industrial controller, the primary aggregation component aggregates a plurality of selected data items stored in the industrial controller into an aggregated subset of data items; a communications component associated with the remote entity, the communications component reads the aggregated subset of data items via a singular communications packet across a network, the communications component causes addition of at least one secondary aggregation component at the industrial controller in response to increased data demands, wherein the communication component causes removal of the at least one secondary aggregation components in response to decreased data demands; and an update component associated with the remote entity, the update component receives handle information from the industrial controller across the network relating to the plurality of selected data items, the update component employs the handle information to generate an update data packet request that is transmitted across the network to the industrial controller to update one or more data items of the aggregated subset of data items in the industrial controller, wherein the handle information provides a fixed length reference pointer to a memory address in the industrial controller for each of variable length tag references of the plurality of selected data items, wherein the update data packet request employs the fixed length

reference pointer in place of a variable length tag reference for each of the one or more data items of the aggregated subset of data items that are to be updated.

Claims 2-7, 10-19, 24-28 and 34-39 further limit the allowed claims, therefore they are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusions

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAN-DAI Thi TRUONG whose telephone number is (571)272-7959. The examiner can normally be reached on Monday- Friday from 8:30am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on 571-272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ldt.

01/28/2010.

/THU NGUYEN/
Supervisory Patent Examiner, Art Unit 2452